3.3 CUMBERLAND RIVER BASIN
RED RIVER – SULPHUR FORK

DESCRIPTION and EXTENT OF PROBLEM

According to the 1998 303(d) List, more than 29 miles of Sulphur Fork Creek is partially supporting because of sediment loading caused by agricultural activity. Construction and the need for stream bank stabilization are also growing sources of siltation in this UWA watershed.

1998 303(d) LIST

WATERSHED NAME	SOURCES
Red River-Sulphur Fork	siltation/agriculture

SUBWATERSHED ROTATIONAL PLAN

The Sulphur Fork Creek watershed is currently receiving 319 and match funding through an FY-97 grant. The Millers Creek subwatershed was selected because of its agricultural predominance. As the FY-97 grant progresses the project manager, APSU, also manager of the Millers Creek UWA project, should be able to determine, with assistance from TDEC, which Sulphur Fork Creek subwatershed should be addressed next with UWA funding. As is common in most of the UWA watersheds, agricultural BMP activity is more advanced than other nonpoint source issues.

It is important to note that while these UWA efforts are ongoing, the base grants will also be funding demonstration BMPs and public awareness efforts throughout the watershed. These efforts will address failing septic systems, construction, and possibly urban runoff issues.

The next watershed to be addressed with UWA funds would be Brush Creek, to the west and further from the urbanization of the City of Springfield, and possibly Beaver Dam Creek, which is east and upstream of the City of Springfield. As urban runoff and construction issues are better understood by local partners, the subwatersheds of Hood, Caleb, and Carr creeks will be included as UWA watershed projects. Once all of these subwatersheds have been addressed with sufficient BMP implementation efforts, Sulphur Fork Creek should likely be removed from the 303(d) List.

COOPERATING PARTNERS

Partners	Abbreviations
Austin Peay State University Center for Field Biology	APSU
Five Rivers RC&D Council	RC&D
Local developers & home builders	
Local landowners	
Robertson County government	
Robertson County Soil Conservation District	SCD
City of Springfield	
Tennessee Department of Agriculture	

Ag Resources Conservation Program	TDA-ARC
Tennessee Department of Environment & Conservation	
Division of Water Pollution Control	TDEC-WPC
Tennessee Home Builders Assoc.-Middle Tennessee	THBA
U.T. Institute of Agriculture	UTIA
U.T. County Technical Assistance Service	UT-CTAS
U.S. Department of Agriculture	
Natural Resource Conservation Service	USDA-NRCS
U.S. Department of Interior	
Geological Survey	USGS

APSU-Center for Field Biology
Austin Peay State University (APSU) is the manager of the Millers Creek watershed project. A partnership has already begun between APSU, TDEC-WPC, USDA-NRCS, RC&D and UTIA. The USDA-NRCS will do BMP implementation, TDEC-WPC will fulfill the water quality monitoring requirements of the project, and the RC&D and UTIA will perform educational activities.

Five Rivers RC&D Council
The local RC&D Council can manage projects, implement BMPs, and provide education to the public. The RC&Ds ability in these areas will lead the development of more projects as well as projects in adjacent watersheds.

Local developers & home builders
Robertson County is rapidly growing with many rural areas becoming sub-urbanized. Agricultural-related problems are giving way to construction and urban runoff problems, an issue, which can be minimized if developers, contractors, and home builders make the effort to eliminate sediment loadings and high stormwater discharges. The NPS Program has coordinated with local officials, through a FY-99 grant project to introduce nonpoint source technologies to the area.

Local landowners
Landowners will be requested to participate in the implementation of BMPs by allowing the BMP to be placed on their property, contributing to the construction of the BMP through in-kind services, and maintaining the BMP for a pre-determined or indefinite period of time. These same landowners will also be required to allow others to visit the BMP once it has been fully constructed.

Local Government
As Robertson County residential and commercial growth continues to take some of the remaining farmlands of the Red River - Sulphur Fork Creek watershed, its officials and residents will need to remain aware of and protect the existing Ag-related remediation work already in place. More importantly, government officials need to assume a leadership role in the nonpoint source effort by establishing water quality control measures for all construction sites and stormwater problem areas as growth continues.

City officials will be encouraged to work with local landowners and contractors to at least investigate the possibilities of installing BMPs to reduce construction and urban-related runoff. Even though initial BMPs implemented in the watershed will be of an agricultural nature, the city officials, landowners, and contractors will be provided an opportunity to learn how these BMPs can be converted to more urbanized usage.

Robertson County Soil Conservation District
The Soil Conservation District is a partner in the effort to reduce nonpoint source pollution to the local waters. The SCD can provide a significant amount of financial assistance to local water quality efforts. Through its direct interaction with the local NRCS district conservationist, the SCD can also direct technical as well as administrative assistance to local water quality projects. The SCD also serves as a leader in the effort to increase water quality education of the local citizens and operators.

CURRENT 319 PROJECTS

The FY-97 grant project, Reducing NPS Pollution in the Sulphur Fork Creek Watershed, will demonstrate BMPs for a wide variety of nonpoint source categories in subwatersheds of the Sulphur Fork Creek watershed. The degree of impact originating from the nonpoint source issues varies from one subwatershed to the next. The closer the subwatershed is to the city of Springfield the more construction and urban runoff issues need to be demonstrated. While the FY-99 UWA project will be addressing the predominately agricultural Millers Branch subwatershed, a FY-99 Base project addresses urban runoff demonstration in the city of Springfield.

The following is a listing of what 319 projects have addressed water quality issues in Red River-Sulphur Fork watershed.

Grant Yr.	Project Title	Partner
FY-97	Reducing NPS Pollution in the Sulphur Fork Creek W'shed	APSU
FY-99	Urban Runoff NPS Demonstration & Education Project	5Rivers RC&D
FY-99(UWA)	Red River Water Quality Restoration Project: Sulphur Fork	APSU

CURRENT MONITORING & ASSESSMENT

TDEC-WPC five-year watershed management approach
TDH-DLS pre- and post- BMP monitoring
APSU 319 monitoring

MEASURES OF SUCCESS

- UWA projects have been implemented in all 303(d) listed subwatersheds.
- Base projects have been implemented in all 303(d) listed subwatersheds which require the introduction of un-addressed nps categories (i.e. failing septic systems, construction, and urban runoff) through demonstration projects.

- Post BMP implementation monitoring results are indicating an overall improvement of the water quality of the streams directly affected by BMP implementation.
- The subwatersheds once 303(d) listed have been removed due to sufficient water quality improvements.

MILESTONES

Long Term Goal 1.

Hold regularly scheduled meetings with stakeholders, to create new partnerships, strengthen existing partnerships and to foster greater trust, commitment and accountability.

- **Action**: Conduct an annual priority watershed partners meeting for project coordination.
  Lead: TDA-NPS Program
  Key Partners: TDEC-WPC; USDA-NRCS; TDH-DLS; local governments
  Year(s): 2001-2005

- **Action**: Develop a Watershed Restoration Action Strategy.
  Lead: TDA-NPS Program
  Key Partners: TDEC-WPC; USDA-NRCS; TDEC-DWS-GWMS
  Year(s): 2001

Long Term Goal 3.

Restore all waters impaired by nonpoint sources that are listed on the 1998 303(d) List to the condition of fully supporting their designated uses by 2015, in cooperation with local, state and federal partners.

- **Action**: Twenty percent of the needed agricultural BMPs will have been implemented in the Red River – Sulphur Fork watershed.
  Lead: USDA-NRCS; APSU; RC&D; SCD
  Key Partners: TDA-NPS Program
  Year(s): 2005

- **Action**: One hundred percent of the needed agricultural BMPs will have been implemented in the Red River – Sulphur Fork – Millers Creek subwatershed.
  Lead: USDA-NRCS; APSU; RC&D; SCD
  Key Partners: TDA-NPS Program
  Year(s): 2005

Long Term Goal 5.

Improve the knowledge of stakeholders and citizens concerning the origins, magnitude, and prevention of nonpoint source pollution.

- **Action**: Develop at least two educational projects to educate the local citizens, landowners, and elected officials in the Red River – Sulphur Fork subwatershed.
  Lead: TDA-NPS Program
  Key Partner: TDEC-WPC; RC&D; APSU; SCD
  Year(s): 2005

Long Term Goal 7.

Use the maximum allowable percentage of funding annually to assist partners with water quality monitoring and assessment, for the duration of the 319 program.

- **Action**: Pre-BMP implementation monitoring will have been completed in all of the subwatersheds of the Red River – Sulphur Fork watershed.
  Lead: TDEC-WPC; APSU; TDH-DLS
  Key Partners: TDA-NPS Program
  Year(s): 2005

- **Action**: Water quality of the Red River – Sulphur Fork – Millers Creek subwatershed will be indicating a trend towards being fully supporting its designated uses.
  Lead: TDEC-WPC and TDH-DLS
  Key Partners: APSU; USDA-NRCS; SCD
  Year(s): 2005